

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/511,875  
Source: PCT  
Date Processed by STIC: 1-30-06

***ENTERED***



PCT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/511,875

DATE: 01/30/2006

TIME: 14:58:06

Input Set : E:\56446-20042.01 - Seqlist (Client).txt  
 Output Set: N:\CRF4\01302006\J511875.raw

4 <110> APPLICANT: Gramatikova, Svetlana  
 5 Hazlewood, Geoff  
 7 <120> TITLE OF INVENTION: PHOSPHOLIPASES, NUCLEIC ACIDS ENCODING THEM  
 8 AND METHODS FOR MAKING AND USING THEM  
 10 <130> FILE REFERENCE: 564462004201  
 12 <140> CURRENT APPLICATION NUMBER: 10/511,875  
 C--> 13 <141> CURRENT FILING DATE: 2004-10-19  
 15 <150> PRIOR APPLICATION NUMBER: PCT/US03/12556  
 16 <151> PRIOR FILING DATE: 2003-04-21  
 18 <150> PRIOR APPLICATION NUMBER: 60/374,313  
 19 <151> PRIOR FILING DATE: 2002-04-19  
 21 <160> NUMBER OF SEQ ID NOS: 106  
 23 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 25 <210> SEQ ID NO: 1  
 26 <211> LENGTH: 849  
 27 <212> TYPE: DNA  
 28 <213> ORGANISM: Unknown  
 30 <220> FEATURE:  
 31 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 33 <400> SEQUENCE: 1  
 34 atgaaaaaaga aagtatttagc actagcagct atggttgctt tagctgcgcc agttcaaagt 60  
 35 gtagtatttg cacaaacaaa taatagtgaa agtcctgcac cgattttaaag atggtcagct 120  
 36 gaggataagc ataatgaggg gattaactct catttggta ttgtaaatcg tgcaattgac 180  
 37 atcatgtctc gtaatacacaac gattgtgaat ccgaatgaaa ctgcattatt aaatgagtgg 240  
 38 cgtgctgatt tagaaaatgg tatttattct gctgattacg agaattccta ttatgataat 300  
 39 agtacatatg cttctcaattt ttatgatccg gatactggaa caacatataat tcctttgcg 360  
 40 aaacatgc当地 aagaaacagg cgcaaaaatattt ttaaccttg ctggtaagc atacaaaat 420  
 41 caagatatgc agcaaggcatt ctctactta ggattatcgc ttcattattt aggagatgtg 480  
 42 aatcagccaa tgcattgc当地 aaactttacg aatcttctt atccaatggg tttccattct 540  
 43 aaatacggaaa attttggta tacaataaaaa aataactata ttgtttcaga tagcaatgg 600  
 44 tattggaaatt ggaaaggaggc aaacccaggaa gattggattt aaggaggcgc ggttagcagct 660  
 45 aaacaagatt atcctggcgt tgtgaacacgat acgacaaaag attggtttggtaaaaaggcagcc 720  
 46 gtatctcaag aatatgc当地 taaatggcgt gcgaaagtaa caccgggtgac agggaaaggcgt 780  
 47 ttaatggaaag cgccgc当地 tacagctggt tatattcatt tgtggtttga tacgtatgta 840  
 48 aatcgctaa 849  
 50 <210> SEQ ID NO: 2  
 51 <211> LENGTH: 282  
 52 <212> TYPE: PRT  
 53 <213> ORGANISM: Unknown  
 55 <220> FEATURE:  
 56 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 W--> 58 <221> NAME/KEY: SIGNAL  
 59 <222> LOCATION: (1)...(24)

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Input Set : E:\56446-20042.01 - Seqlist (Client).txt  
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W--> 61 <400> 2  
 62 Met Lys Lys Lys Val Leu Ala Leu Ala Ala Met Val Ala Leu Ala Ala  
 63 1 5 10 15  
 64 Pro Val Gln Ser Val Val Phe Ala Gln Thr Asn Asn Ser Glu Ser Pro  
 65 20 25 30  
 66 Ala Pro Ile Leu Arg Trp Ser Ala Glu Asp Lys His Asn Glu Gly Ile  
 67 35 40 45  
 68 Asn Ser His Leu Trp Ile Val Asn Arg Ala Ile Asp Ile Met Ser Arg  
 69 50 55 60  
 70 Asn Thr Thr Ile Val Asn Pro Asn Glu Thr Ala Leu Leu Asn Glu Trp  
 71 65 70 75 80  
 72 Arg Ala Asp Leu Glu Asn Gly Ile Tyr Ser Ala Asp Tyr Glu Asn Pro  
 73 85 90 95  
 74 Tyr Tyr Asp Asn Ser Thr Tyr Ala Ser His Phe Tyr Asp Pro Asp Thr  
 75 100 105 110  
 76 Gly Thr Thr Tyr Ile Pro Phe Ala Lys His Ala Lys Glu Thr Gly Ala  
 77 115 120 125  
 78 Lys Tyr Phe Asn Leu Ala Gly Gln Ala Tyr Gln Asn Gln Asp Met Gln  
 79 130 135 140  
 80 Gln Ala Phe Phe Tyr Leu Gly Leu Ser Leu His Tyr Leu Gly Asp Val  
 81 145 150 155 160  
 82 Asn Gln Pro Met His Ala Ala Asn Phe Thr Asn Leu Ser Tyr Pro Met  
 83 165 170 175  
 84 Gly Phe His Ser Lys Tyr Glu Asn Phe Val Asp Thr Ile Lys Asn Asn  
 85 180 185 190  
 86 Tyr Ile Val Ser Asp Ser Asn Gly Tyr Trp Asn Trp Lys Gly Ala Asn  
 87 195 200 205  
 88 Pro Glu Asp Trp Ile Glu Gly Ala Ala Val Ala Ala Lys Gln Asp Tyr  
 89 210 215 220  
 90 Pro Gly Val Val Asn Asp Thr Thr Lys Asp Trp Phe Val Lys Ala Ala  
 91 225 230 235 240  
 92 Val Ser Gln Glu Tyr Ala Asp Lys Trp Arg Ala Glu Val Thr Pro Val  
 93 245 250 255  
 94 Thr Gly Lys Arg Leu Met Glu Ala Gln Arg Val Thr Ala Gly Tyr Ile  
 95 260 265 270  
 96 His Leu Trp Phe Asp Thr Tyr Val Asn Arg  
 97 275 280  
 99 <210> SEQ ID NO: 3  
 100 <211> LENGTH: 852  
 101 <212> TYPE: DNA  
 102 <213> ORGANISM: Unknown  
 104 <220> FEATURE:  
 105 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 107 <400> SEQUENCE: 3  
 108 atgaaaagaa aaatttttagc tatagttcc gtaattgttt taacagctcc tatccaaagt 60  
 109 gtggcgtttg cgcataaaaa tggtcaccaa gatccaccaa ttgtcttaaa gtgtcagca 120  
 110 gaatctatac ataatgaagg agtaagttct catttatggg ttgtaaacag agccattgtat 180  
 111 attatgtccc aaaatacgac tgggtgtgaag caaaatgaga cagctctatt aaatgaatgg 240  
 112 cgtacggatc tagagaaagg catttactct gcggattatg aaaacccata ctatgataat 300

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113 tccacattcg ctgcacactt ctatgatcct gattcaggaa aaacgtatat tccatttgct 360  
 114 aaacaagcaa agcaaacagg agcgaaatat tttaaattag ctggtaagc ttatcaaaat 420  
 115 aaagatctga aaaacgcatt cttttattta ggattatcac ttcaactattt agggatgtc 480  
 116 aaccaaccaa tgcatgcagc aaactttact aatatttcgc atccatttgg cttccactca 540  
 117 aaatatgaaa attcgttga tacagtggaaa gacaattata gagtaacgga tgaaaatggc 600  
 118 tatttggaaatt ggcaaagtgc aaatccagaa gagtgggttc atgcatcagc atcagcagca 660  
 119 aaagctgatt ttccatcaat tgtaatgt aagacgaaaa attgggttct aaaagcagct 720  
 120 gtatcacaag actctgctga taaatggcgt gcagaagtaa caccgataac agaaaaacgt 780  
 121 ttaatggaaag cgcagcgtgt tacagctgga tatatccatt tatggttga tacgtacgtg 840  
 122 aataacaaat aa 852  
 124 <210> SEQ ID NO: 4  
 125 <211> LENGTH: 283  
 126 <212> TYPE: PRT  
 127 <213> ORGANISM: Unknown  
 129 <220> FEATURE:  
 130 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 W--> 132 <221> NAME/KEY: SIGNAL  
 133 <222> LOCATION: (1)...(24)  
 W--> 135 <400> 4  
 136 Met Lys Arg Lys Ile Leu Ala Ile Ala Ser Val Ile Ala Leu Thr Ala  
 137 1 5 10 15  
 138 Pro Ile Gln Ser Val Ala Phe Ala His Glu Asn Gly His Gln Asp Pro  
 139 20 25 30  
 140 Pro Ile Ala Leu Lys Trp Ser Ala Glu Ser Ile His Asn Glu Gly Val  
 141 35 40 45  
 142 Ser Ser His Leu Trp Ile Val Asn Arg Ala Ile Asp Ile Met Ser Gln  
 143 50 55 60  
 144 Asn Thr Thr Val Val Lys Gln Asn Glu Thr Ala Leu Leu Asn Glu Trp  
 145 65 70 75 80  
 146 Arg Thr Asp Leu Glu Lys Gly Ile Tyr Ser Ala Asp Tyr Glu Asn Pro  
 147 85 90 95  
 148 Tyr Tyr Asp Asn Ser Thr Phe Ala Ser His Phe Tyr Asp Pro Asp Ser  
 149 100 105 110  
 150 Gly Lys Thr Tyr Ile Pro Phe Ala Lys Gln Ala Lys Gln Thr Gly Ala  
 151 115 120 125  
 152 Lys Tyr Phe Lys Leu Ala Gly Glu Ala Tyr Gln Asn Lys Asp Leu Lys  
 153 130 135 140  
 154 Asn Ala Phe Phe Tyr Leu Gly Leu Ser Leu His Tyr Leu Gly Asp Val  
 155 145 150 155 160  
 156 Asn Gln Pro Met His Ala Ala Asn Phe Thr Asn Ile Ser His Pro Phe  
 157 165 170 175  
 158 Gly Phe His Ser Lys Tyr Glu Asn Phe Val Asp Thr Val Lys Asp Asn  
 159 180 185 190  
 160 Tyr Arg Val Thr Asp Gly Asn Gly Tyr Trp Asn Trp Gln Ser Ala Asn  
 161 195 200 205  
 162 Pro Glu Glu Trp Val His Ala Ser Ala Ser Ala Ala Lys Ala Asp Phe  
 163 210 215 220  
 164 Pro Ser Ile Val Asn Asp Lys Thr Lys Asn Trp Phe Leu Lys Ala Ala  
 165 225 230 235 240

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166 Val Ser Gln Asp Ser Ala Asp Lys Trp Arg Ala Glu Val Thr Pro Ile  
 167 245 250 255  
 168 Thr Gly Lys Arg Leu Met Glu Ala Gln Arg Val Thr Ala Gly Tyr Ile  
 169 260 265 270  
 170 His Leu Trp Phe Asp Thr Tyr Val Asn Asn Lys  
 171 275 280  
 173 <210> SEQ ID NO: 5  
 174 <211> LENGTH: 843  
 175 <212> TYPE: DNA  
 176 <213> ORGANISM: Unknown  
 178 <220> FEATURE:  
 179 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 181 <400> SEQUENCE: 5  
 182 atgaaaagaa aaatttttagc tatagcttct gtaattgctt taacagctcc tattcaaagt 60  
 183 gtggcgtttg cgcatgaatc tgatgggcct attgctttaa gatggtcagc ggaatctgt 120  
 184 cataatgaag gagtaagttc tcatttatgg attgtaaaca gagcaatga tattatgtcc 180  
 185 caaaaatacga ctgtggtaaa gcaaaatgag acagctctat taaaatgaatg gcgtacgaat 240  
 186 ttggaggaag gtatttattc tgcaagattt aaaaacccat actatgataa ttccacattc 300  
 187 gcttcacact tctatgatcc tgattcagaa aaaacgtata ttccatttgc taaacaagca 360  
 188 aagcaaacgg gagcaaagta ttttaaattt gctggtaag cttatcaaaa taaagatctg 420  
 189 aaaaatgcat tcttttattt aggattatca ctccattt tagggatgt caatcaacca 480  
 190 atgcatgcag caaactttac taacatttcg catccatttgc gcttccactc aaaaatatgaa 540  
 191 aacttcgttg atacagtgaa agacaattt agagtaacag atggagatgg ctattggat 600  
 192 tggaaaatgt caaatccaga agagtgggtt catgcatcag catcagcagc aaaaagctgt 660  
 193 ttcccatcaa ttgttaatga taatacggaa agttggttcc taaaagcagc ggtatcacaa 720  
 194 gactctgctg acaaatggcg tgctgaagta acaccggtaa caggaaaacg tttaatggaa 780  
 195 gcacagcgtt ttacagctgg atatattcat ttatggtttgc atacgtacgt gaataacaaa 840  
 196 taa 843  
 198 <210> SEQ ID NO: 6  
 199 <211> LENGTH: 280  
 200 <212> TYPE: PRT  
 201 <213> ORGANISM: Unknown  
 203 <220> FEATURE:  
 204 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 W--> 206 <221> NAME/KEY: SIGNAL  
 207 <222> LOCATION: (1)...(24)  
 W--> 209 <400> 6  
 210 Met Lys Arg Lys Ile Leu Ala Ile Ala Ser Val Ile Ala Leu Thr Ala  
 211 1 5 10 15  
 212 Pro Ile Gln Ser Val Ala Phe Ala His Glu Ser Asp Gly Pro Ile Ala  
 213 20 25 30  
 214 Leu Arg Trp Ser Ala Glu Ser Val His Asn Glu Gly Val Ser Ser His  
 215 35 40 45  
 216 Leu Trp Ile Val Asn Arg Ala Ile Asp Ile Met Ser Gln Asn Thr Thr  
 217 50 55 60  
 218 Val Val Lys Gln Asn Glu Thr Ala Leu Leu Asn Glu Trp Arg Thr Asn  
 219 65 70 75 80  
 220 Leu Glu Glu Gly Ile Tyr Ser Ala Asp Tyr Lys Asn Pro Tyr Tyr Asp  
 221 85 90 95

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222 Asn Ser Thr Phe Ala Ser His Phe Tyr Asp Pro Asp Ser Glu Lys Thr  
 223 100 105 110  
 224 Tyr Ile Pro Phe Ala Lys Gln Ala Lys Gln Thr Gly Ala Lys Tyr Phe  
 225 115 120 125  
 226 Lys Leu Ala Gly Glu Ala Tyr Gln Asn Lys Asp Leu Lys Asn Ala Phe  
 227 130 135 140  
 228 Phe Tyr Leu Gly Leu Ser Leu His Tyr Leu Gly Asp Val Asn Gln Pro  
 229 145 150 155 160  
 230 Met His Ala Ala Asn Phe Thr Asn Ile Ser His Pro Phe Gly Phe His  
 231 165 170 175  
 232 Ser Lys Tyr Glu Asn Phe Val Asp Thr Val Lys Asp Asn Tyr Arg Val  
 233 180 185 190  
 234 Thr Asp Gly Asp Gly Tyr Trp Asn Trp Lys Ser Ala Asn Pro Glu Glu  
 235 195 200 205  
 236 Trp Val His Ala Ser Ala Ser Ala Ala Lys Ala Asp Phe Pro Ser Ile  
 237 210 215 220  
 238 Val Asn Asp Asn Thr Lys Ser Trp Phe Leu Lys Ala Ala Val Ser Gln  
 239 225 230 235 240  
 240 Asp Ser Ala Asp Lys Trp Arg Ala Glu Val Thr Pro Val Thr Gly Lys  
 241 245 250 255  
 242 Arg Leu Met Glu Ala Gln Arg Ile Thr Ala Gly Tyr Ile His Leu Trp  
 243 260 265 270  
 244 Phe Asp Thr Tyr Val Asn Asn Lys  
 245 275 280  
 247 <210> SEQ ID NO: 7  
 248 <211> LENGTH: 963  
 249 <212> TYPE: DNA  
 250 <213> ORGANISM: Unknown  
 252 <220> FEATURE:  
 253 <223> OTHER INFORMATION: Obtained from an environmental sample.  
 255 <400> SEQUENCE: 7  
 256 gtgattactt tgataaaaaa atgtttatta gtattgacga tgactctatt gttaggggtt 60  
 257 ttcgtaccgc tgcagccatc acatgctact gaaaattatc caaatgatt taaactgttg 120  
 258 caacataatg tatttttatt gcctgaatca gtttcttatt ggggtcagga cgaacgtgca 180  
 259 gattatatga gtaatgcaga ttacttcaag ggacatgatg ctctgctctt aaatgagctt 240  
 260 tttgacaatg gaaattcgaat catgctgata atgaacttat ccacggaata tccatatcaa 300  
 261 acgccagtgc ttggccgttc gatgagtgga tggatgaaa ctagaggaag ctattctaat 360  
 262 tttgtacccg aagatggcggt ttagcaatt atcagtaat ggccaatcgt ggagaaaaata 420  
 263 cagcatgttt acgcgaatgg ttgcggtgca gactattatg caaataaagg atttgcatt 480  
 264 gcaaaaagtac aaaaaggggta taaattctat catottatca gcactcatgc tcaagccgaa 540  
 265 gatactgggt gtgatcagggt tgaaggagca gaaattcgtc attcacagtt tcaagaaatc 600  
 266 aacgacttta taaaaataaa aaacattccg aaagatgaag tggattttat tggtgggtgac 660  
 267 tttaatgtga tgaagagtga cacaacagag tacaatagca tggttatcaac attaaatgtc 720  
 268 aatgcgccta ccgaatattt agggcatatgc tctacttggg acccagaaaac gaacagcatt 780  
 269 acaggttaca attaccctga ttatgcgcga cagcatttag attatatttt tggaaaaaaa 840  
 270 gatcataaaac aaccaagttc atgggtaaat gaaacgatta ctccgaagtc tccaaacttgg 900  
 271 aaggcaatct atgagtataa tgattattcc gatcaactatc ctgttaaagc atacgtaaaa 960  
 272 taa  
 274 <210> SEQ ID NO: 8

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/511,875

DATE: 01/30/2006

TIME: 14:58:07

Input Set : E:\56446-20042.01 - Seqlist (Client).txt  
Output Set: N:\CRF4\01302006\J511875.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:58 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:61 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2  
L:132 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:135 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4  
L:206 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:209 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6  
L:282 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:285 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8  
L:362 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:365 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10  
L:798 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:801 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20  
L:902 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:905 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22  
L:1374 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1377 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:32  
L:1650 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1653 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:38  
L:2238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2241 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:50  
L:2818 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2821 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:62  
L:2916 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2919 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:64  
L:3753 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3756 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:80  
L:3872 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3875 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:82  
L:3977 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:3980 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84  
L:4233 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4236 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:90  
L:4415 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4418 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:94  
L:4584 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4587 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:98  
L:4988 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:4991 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:106